

DERWENT-ACC-NO: 2000-533060
DERWENT-WEEK: 200274
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TITLE: High performance permanent magnetic material of
iron-boron-rare earth
type used in a magnetic resonance imaging device comprising
rare earth
component, boron, and iron with a specified amount of
impurities

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GENERAL ELECTRIC
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CN 1263349 A	000	H01F 001/057	January 31, 2001	E
AU 200027515 A				
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CN 1263349A	N/A	2000AU-00275
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AU 200027515A	Based on	WO 200048208
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ABSTRACTED-PUB-NO: WO 200048208A
BASIC-ABSTRACT: NOVELTY - A high performance permanent magnetic material of iron-boron-rare earth type comprises (atom.%) rare earth component (13-19), boron (4-20), iron with impurities (balance). The rare earth component consists (wt.%) of neodymium (29.8-23.8), praseodymium (70-76), and cerium (approx. 0.2- not more than 5).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a process for preparing a sintered permanent magnetic material of

iron-boron-rare (Fe-B-R)
type comprising: preparing a metallic powder having a
particle size of 0.3-8 μ m,
compacting the powder at at least 1.5 ton/cm², and
sintering the resulted
powder at 900-1200 deg. C in a non-oxidizing or reducing
atmosphere. The
metallic powder contains (atom.%) R (15-16), B (4-8), and
Fe (at least 52).
The rare earth has (wt.%) cerium (Ce) (0.2-5), and balance
of neodymium (Nd)
(28.9-23.8) and praseodymium (Pr) (70-76).

USE - For use in a magnetic resonance imaging (MRI) device
(claimed).

ADVANTAGE - The substitution of portions of Nd with certain
low percentage of
Ce significantly saves the cost of manufacturing the high
performance permanent
magnets of Fe-B-R type while maintaining its magnetic
performance.

CHOSEN-DRAWING: Dwg.0/5

TITLE-TERMS:
HIGH PERFORMANCE PERMANENT MAGNETIC MATERIAL IRON BORON
RARE EARTH TYPE
MAGNETIC RESONANCE IMAGE DEVICE COMPRISE RARE EARTH
COMPONENT BORON IRON
SPECIFIED AMOUNT IMPURE

DERWENT-CLASS: L03 M22 M27 P53 S01 S03 V02

CPI-CODES: L03-B02A5; M22-H03A; M22-H03B; M27-A; M27-A00E
M27-A00X;

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V02-A01A9;

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